

# GoldStar

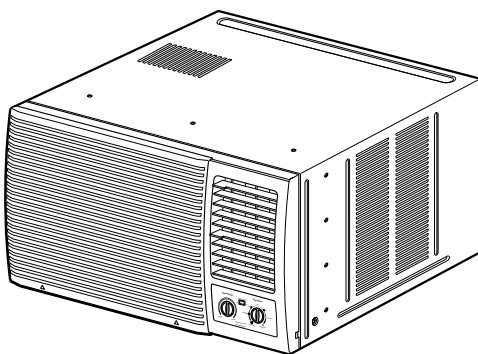
website <http://www.lgservice.com>

## Room Air Conditioner

# ***SERVICE MANUAL***

### CAUTION

- BEFORE SERVICING THE UNIT,  
READ THE SAFETY PRECAUTIONS IN THIS MANUAL.
- ONLY FOR AUTHORIZED SERVICE.



**MODELS: R1804H/M2400HR/HBLG1800H/LWM1836B5S**

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# Safety Precautions



To prevent injury to the user or other people and property damage, the following instructions must be followed.

- Incorrect operation due to ignoring instruction will cause harm or damage. The seriousness is classified by the following indications.

**⚠ WARNING** This symbol indicates the possibility of death or serious injury.

**⚠ CAUTION** This symbol indicates the possibility of injury or damage to property only.

- Meanings of symbols used in this manual are as shown below.

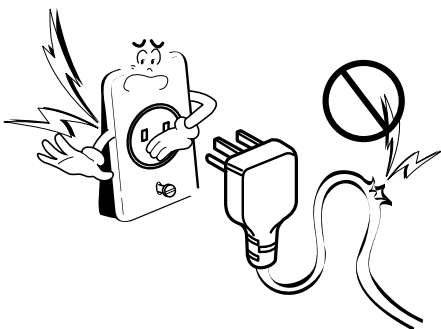
	<b>Be sure not to do.</b>
	<b>Be sure to follow the instruction.</b>

## ⚠ WARNING

### ■ Installation

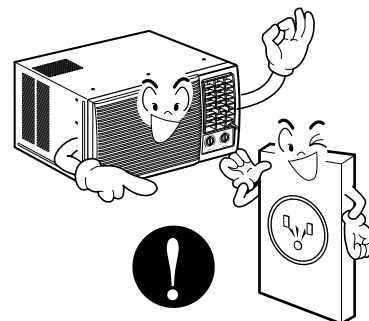
**Do not use damaged power cord plugs, or a loose socket.**

- There is risk of fire or electric shock.



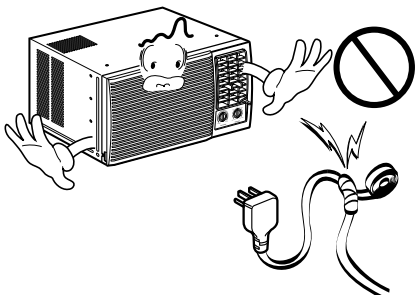
**Always use the power plug and socket with the ground terminal.**

- There is risk of electric shock.



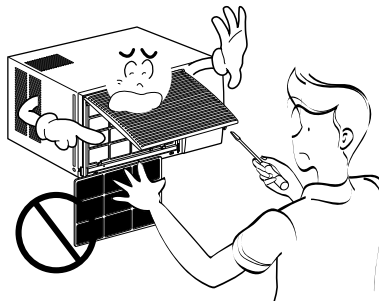
**Do not modify or extend the power cord.**

- There is risk of fire or electric shock.



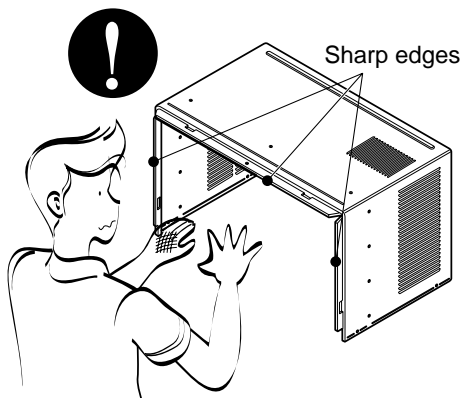
**Do not install, remove, or re-install the unit by yourself.**

- There is risk of fire, electric shock, explosion, or injury.



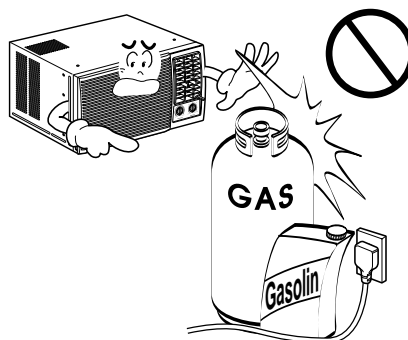
**Be cautious when unpacking and installing the product.**

- Sharp edges could cause injury. Be especially careful of the case edges and the fins on the condenser and evaporator.



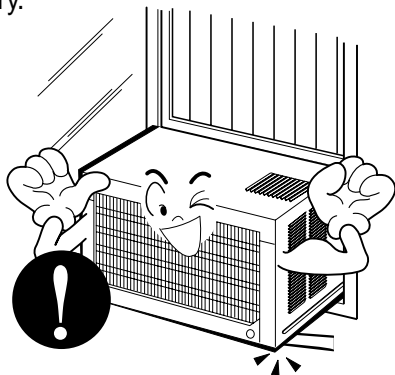
**Do not store or use flammable gas or combustibles near the air conditioner.**

- There is risk of fire or failure of product.



**Be sure the installation area does not deteriorate with age.**

- If the base collapses, the air conditioner could fall with it, causing property damage, product failure, and personal injury.



# Dimensions

## Symbols Used in this Manual



This symbol alerts you to the risk of electric shock.

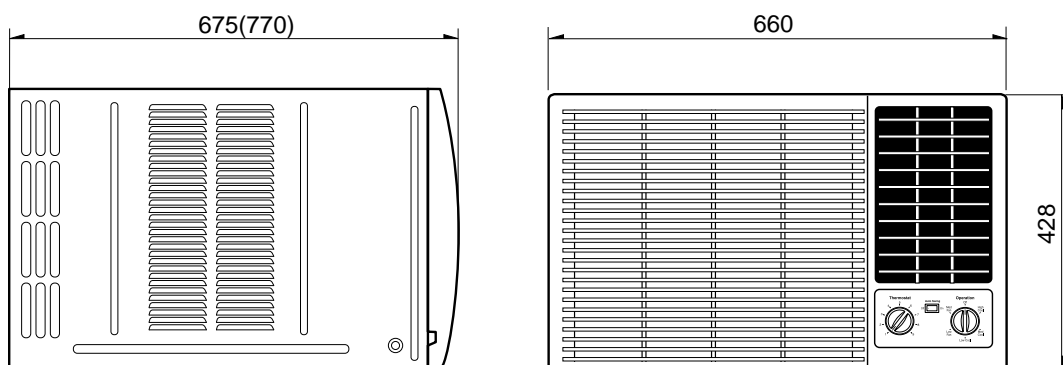


This symbol alerts you to hazards that could cause harm to the air conditioner.

**NOTICE**

This symbol indicates special notes.

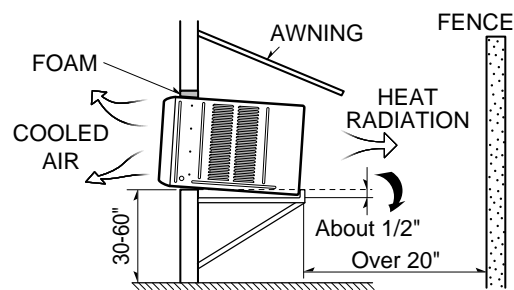
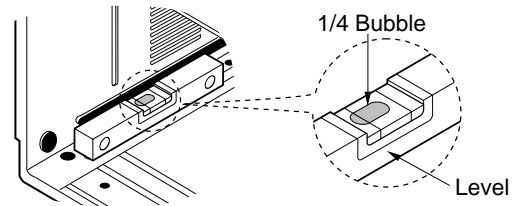
## Outside Dimensions



# INSTALLATION

## How to Install the unit

1. To avoid vibration and noise, make sure the unit is installed securely and firmly.
2. Install the unit where the sunlight does not shine directly on the unit.  
If the unit receives direct sunlight, build an awning to shade the cabinet.
3. There should be no obstacle, like a fence, within 20" which might restrict heat radiation from the condenser.
4. To prevent reducing performance, install the unit so that louvers of the cabinet are not blocked.
5. Install the unit a little obliquely outward not to leak the condensed water into the room (about 1/2" or 1/4 bubble with level).
6. Install the unit with its bottom portion 30~60" above the floor level.
7. Stuff the foam between the top of the unit and the wall to prevent air and insects from getting into the room.
8. The power cord must be connected to an independent circuit. The green wire must be grounded.
9. Connect the drain tube to the base pan hole in the rear side if you need to drain (consult a dealer).  
Plastic hose or equivalent may be connected to the drain tube.

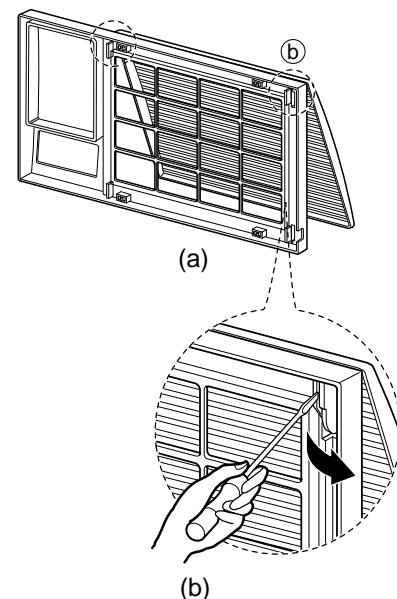


## How to use the Reversible Inlet grille

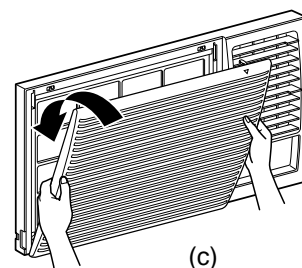
The grille is designed to clean the filter both upward and downward.

### A. BEFORE ATTACHING THE FRONT GRILLE TO THE CABINET, IF YOU WANT TO PULL OUT THE FILTER UPWARD;

1. Open the inlet grille slightly (a).
2. Turn inside out the front grille (a).
3. Disassemble the inlet grille from the front grille with separating the hinged part by inserting a straight type screw-driver tip (b).
4. Then, rotate the inlet grille 180 degrees and insert the hooks into bottom holes of the front grille.
5. Insert the filter and attach the front grille to the cabinet.



### B. IF YOU WANT TO PULL OUT THE FILTER DOWNWARD; THE GRILLE IS ALREADY DESIGNED FOR THAT WAY.



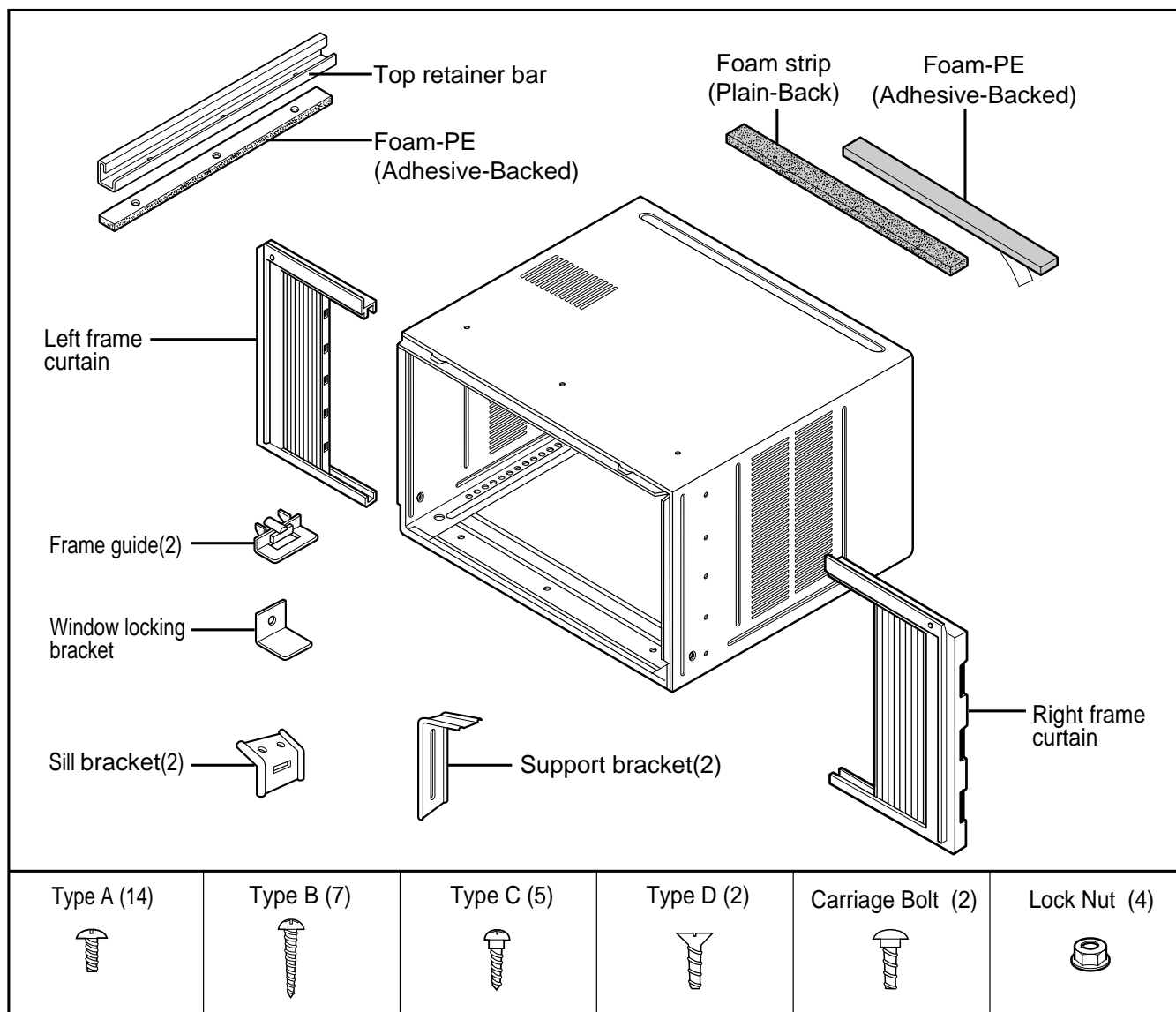
## Window Requirements

**NOTICE** All supporting parts should be secured to firm wood, masonry, or metal.

### • WINDOW REQUIREMENTS

1. This unit is designed for installation in standard double hung windows with actual opening widths from 29" to 41". The top and bottom window sashes must open sufficiently to allow a clear vertical opening of 18" from the bottom of the upper sash to the window stool.
2. The stool offset (height between the stool and sill) must be less than 1 1/4".

## Installation Kits Contents (some models including installation kit)

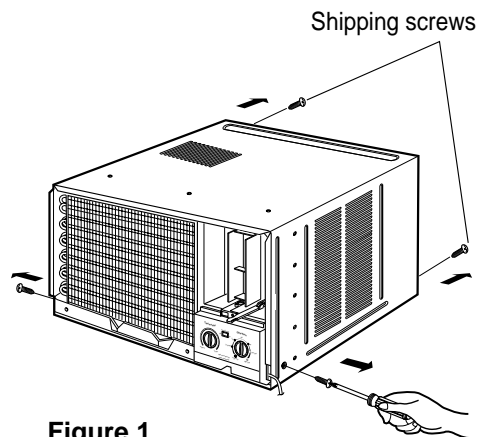


## Suggested tool Requirements

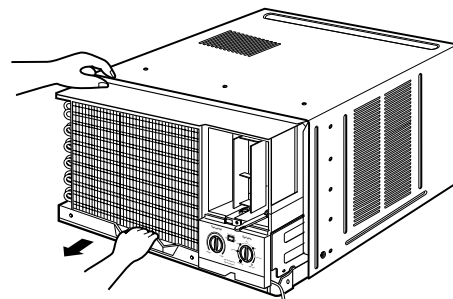
**SCREWDRIVER(+, -), RULER, KNIFE, HAMMER, PENCIL, LEVEL**

### • PREPARATION OF CHASSIS

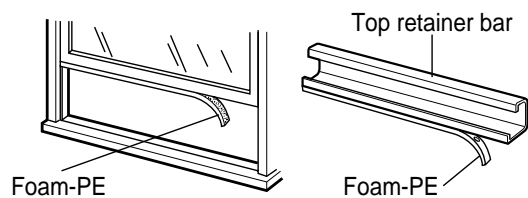
1. Remove the screws which fasten the cabinet at both sides and at the back. Keep these two screws which fasten the cabinet at both sides for later use.
2. Slide the unit out from the cabinet by gripping the base pan handle and pulling forward while bracing the cabinet.
3. Cut the window sash seal to the proper length. Peel off the backing and attach the Foam-PE to the underside of the window sash.
4. Remove the backing from Foam-PE with 3 holes and attach it to the bottom of the Top retainer bar.
5. Attach the Top retainer bar onto the top of the cabinet with 3 screws (Type A).
6. Insert the Frame guides into the bottom of the cabinet.
7. Insert the Frame Curtain into the Top retainer bar and Frame guides.
8. Fasten the curtains to the unit with 10 screws (Type A) at both sides.



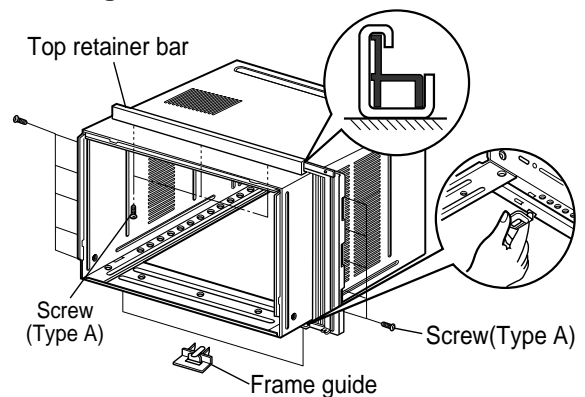
**Figure 1**



**Figure 2**



**Figure 3**



**Figure 4**



## Cabinet Installation

1. Open the window. Mark a line on the center of the window stool between the side window stop moldings. Loosely attach the sill bracket to the support bracket using the carriage bolt and the lock nut.

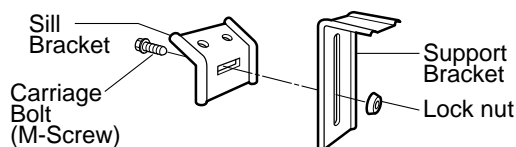


Figure 5

2. Attach the sill bracket to the window sill using the screws (Type B). Carefully place the cabinet on the window stool and align the center mark on the bottom front with the center line marked window stool.

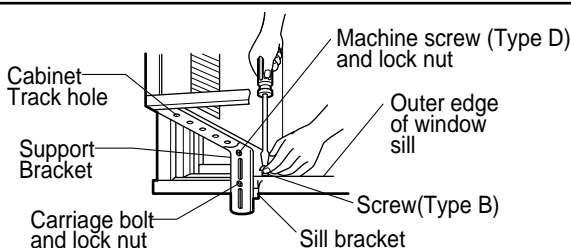


Figure 6

3. Using the M-screw and the lock nut, attach the support bracket to the cabinet track hole. Use the first track hole after the sill bracket on the outer edge of the window sill. Tighten the carriage bolt and the lock nut. Be sure the cabinet slants outward.



**CAUTION:** Do not drill a hole in the bottom pan. The unit is designed to operate with approximately 1/2" of water in bottom pan.

4. Pull the bottom window sash down behind the Top retainer bar until they meet.

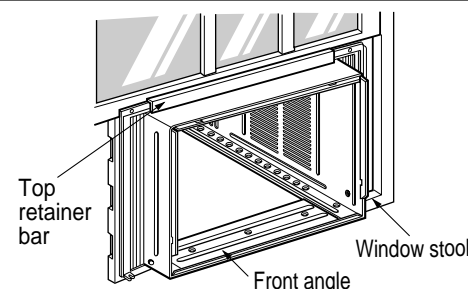


Figure 7

### NOTICE

1. Do not pull the window sash down so tightly that the movement of Frame curtain is restricted. Attach the cabinet to the window stool by driving the screws (Type B) through the cabinet into window stool.
2. The cabinet should be installed with a very slight tilt downward toward the outside.

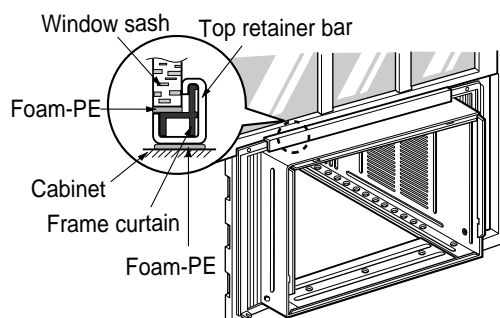


Figure 8

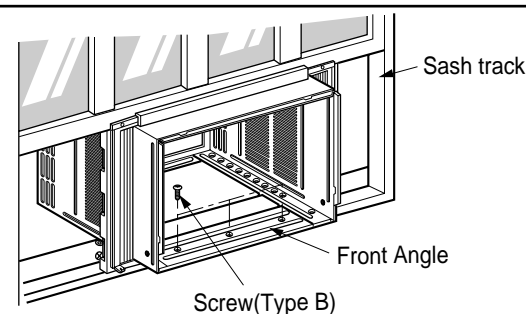


Figure 9

5. Pull each Frame curtain fully to each window sash track, and pull the bottom window sash down behind the Top retainer bar until it meets.

6. Attach each Frame curtain the window sash by using screws (Type C). (See Fig. 10)

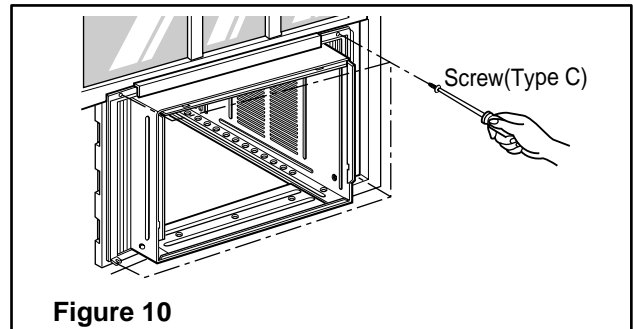


Figure 10

7. Slide the unit into the cabinet. (See Fig. 11)



**CAUTION: For security purpose, re-install screws (Type A) at cabinet's sides.**

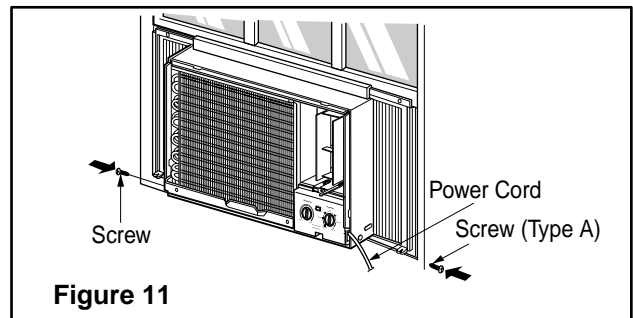


Figure 11

8. Cut the Foam-strip to the proper length and insert between the upper window sash and the lower window sash. (See Fig. 12)

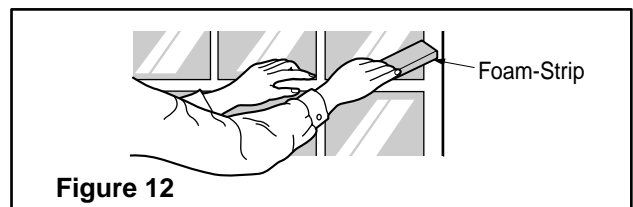


Figure 12

9. Attach the Window locking bracket with a screw (Type C). (See Fig. 13)

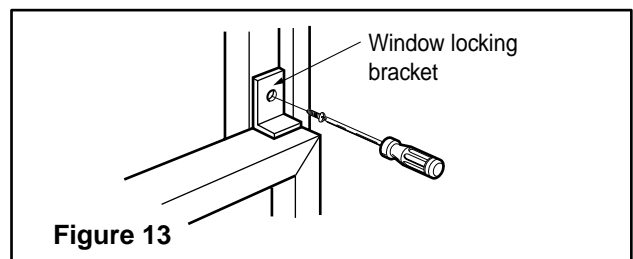


Figure 13

10. Attach the front grille to the cabinet by inserting the tabs on the grille into the tabs on the front of the cabinet. Push the grille in until it snaps into place. (See Fig. 34)

11. Lift the inlet grille and secure it with a screw (Type A) through the front grille. (See Fig. 14)

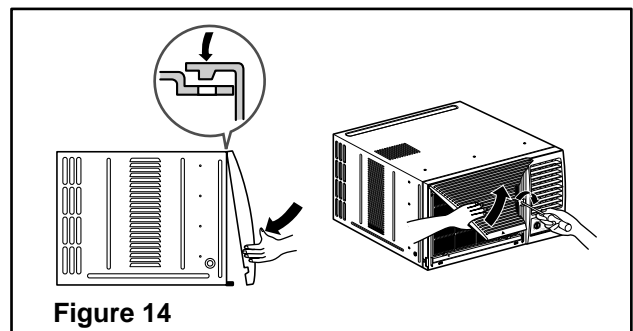


Figure 14

12. Window installation of room air conditioner is now completed.

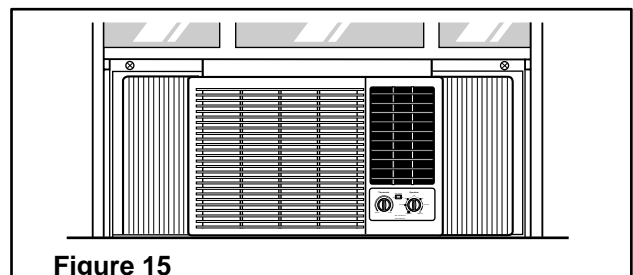


Figure 15

# Operation

## Features

- Powerful and quiet cooling.
- Slide-in and slide-out chassis for the simple installation and service.
- Reversible inlet grille.
- Side air-intake, side cooled-air discharge.
- Built in adjustable THERMOSTAT/THERMISTOR.
- Washable one-touch filter.
- Compact size.

## Control Locations Function of Controls



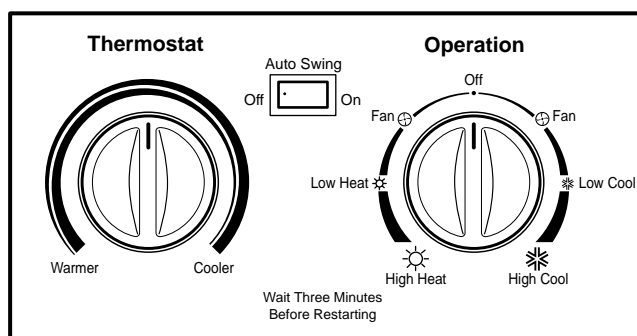
**CAUTION:** When the air conditioner has been performing its cooling operation and is turned off or set to the fan position, wait at least 3 minutes before resetting to the cooling operation again.

### • THERMOSTAT

Turn the thermostat control to the desired setting.

The control position is a normal setting for average conditions. You can change this setting, if necessary, in accordance with your temperature preference.

The thermostat automatically controls cooling or heating, but the fan runs continuously whenever the air conditioner is in operation. If the room is too warm, turn the thermostat control clockwise. If the room is too cool, turn the thermostat control anticlockwise.



### • OPERATION

OFF ( ○ ) : Turns the air conditioner off.

FAN ( ⊕ ) : Permits the low fan speed operation without cooling (heating).

LOW COOL ( \* ) : Permits cooling with the low fan speed operation.

HIGH COOL ( \* ) : Permits cooling with the high fan speed operation.

LOW HEAT ( \* ) : Permits heating with the low fan speed operation.

HIGH HEAT ( \* ) : Permits heating with the high fan speed operation.

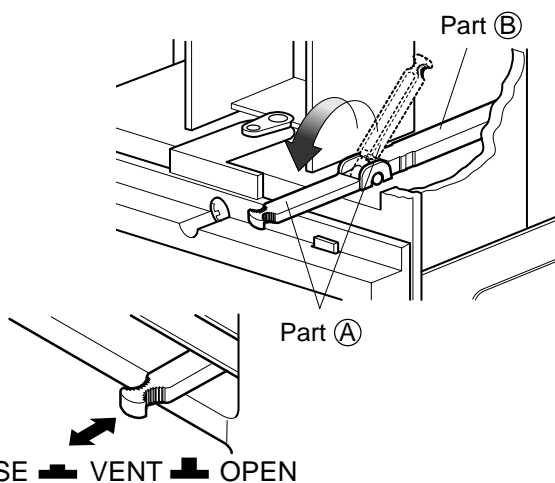
### • AUTO SWING

ON : Starts the operation of air swing.

OFF : Stops the operation of air swing.

- Before you turn the unit off, please press the Auto Swing switch to off.

A slight heat odor may come from the unit when first switching to HEAT after the cooling season is over. This odor, caused by fine dust particles on the heater, will disappear quickly.



### • VENTILATION

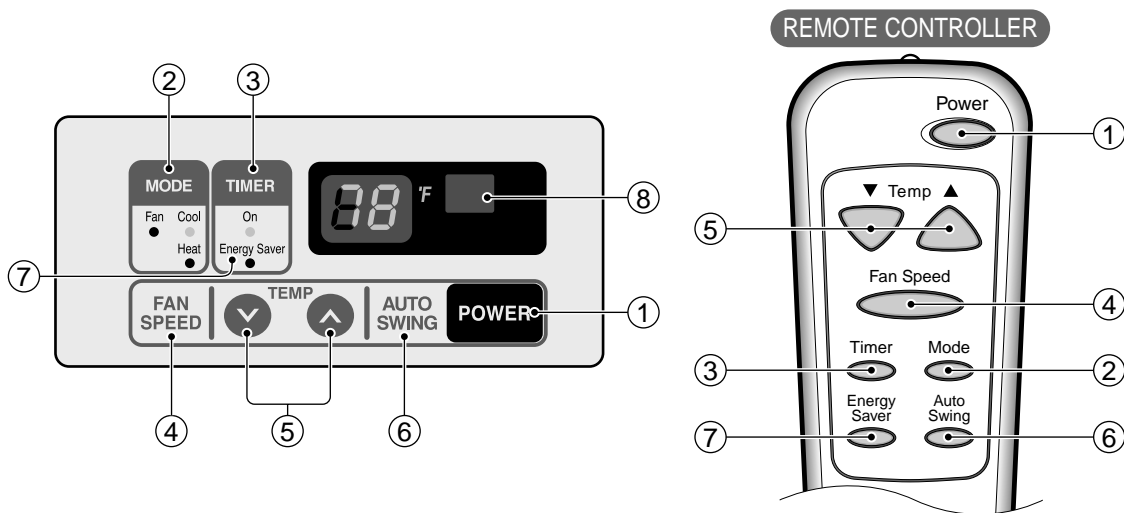
The ventilation lever must be in the CLOSE position in order to maintain the best cooling conditions.

When a fresh air is necessary in the room, set the ventilation lever to the OPEN position.

The damper is opened and room air is exhausted.

**NOTICE** NOTE: Before using the ventilation feature, make the lever, as shown. First, pull down part A to horizontal line with part B.

## • OPERATION



### 1. POWER BUTTON

To turn the air conditioner ON, push the button. To turn the air conditioner OFF, push the button again. This button takes priority over any other buttons.

### 2. OPERATION MODE SELECTION BUTTON

Everytime you push this button, it will toggle COOL, FAN and HEAT.

### 3. ON/OFF TIMER BUTTON

Everytime you push this button, timer is set as follows. (1Hour → 2Hours → 3Hours → 4Hours → 5Hours → 6Hours → 7Hours → 8Hours → 9Hours → 10Hours → 11Hours → 12Hours → Cancel)

### 4. FAN SPEED SELECTOR

Everytime you push this button, it is set as follows. (Hi[ F2 ] → Low[ F1 ] → Hi[ F2 ]....)

### 5. ROOM TEMPERATURE SETTING BUTTON

This button can automatically control the temperature of the room. The temperature can be set within a range of 60°F to 86°F by 1°F.

### 6. AUTO SWING

This button can automatically control the air flow direction.

### 7. ENERGY SAVER

The fan stops when the compressor stops cooling.  
Approximately every 3 minutes the fan will turn on and check the room air to determine if cooling is needed.

### 8. REMOCON SIGNAL RECEIVER

A slight heat odor may come from the unit when first switching to HEAT after the cooling season is over. This odor, caused by fine dust particles on the heater, will disappear quickly.

# Disassembly

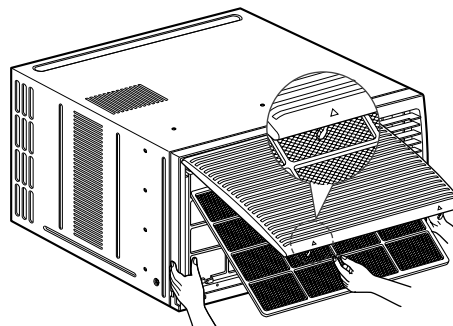
- Before the following disassembly, power switch is set to off and disconnected the power cord.

## Mechanical parts

### 1. Front grille

1. Open the inlet grille upward or downward.
2. Remove the screw which fastens the front grille.
3. Pull the front grille from the right side.
4. Remove the front grille. (See Fig. 16)
5. Re-install the component by referring to the removal procedure.

**NOTICE** Mark  $\Delta$  of inlet grille means opening direction.



### 2. Cabinet

1. After disassembling the front grille, remove the screws which fasten the cabinet at both sides. Keep these for later use.
2. Remove the two screws which fasten the cabinet at back. (See Fig. 17)
3. Pull the base pan forward.

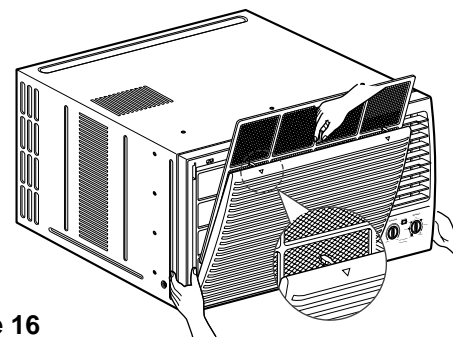


Figure 16

### 3. Control box

1. Remove the front grille. (Refer to section 1)
2. Pull the base pan forward so that you can remove the 2 screws which fasten the cover control at the right side. (See Fig. 18)
3. Remove the 3 screws which fasten the controlbox. (See Fig. 18)
4. Discharge the capacitor by placing a 20,000 ohm resistor across the capacitor terminals.
5. Disconnect two wire housings in the control box.
6. Pull the control box forward completely.
7. Re-install the components by referring to the removal procedure. (See Fig. 18)

(Refer to the wiring diagram found on page 29~30 in this manual and on the control box.)

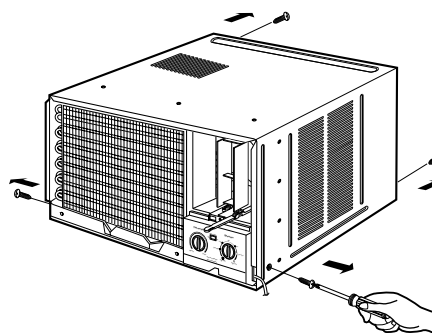


Figure 17

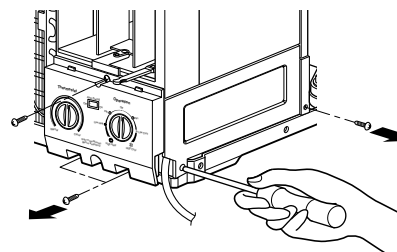


Figure 18

## Air handling parts

### 4. Cover (at the top)

1. Remove the front grille. (Refer to section 1)
2. Remove the cabinet. (Refer to section 2)
3. Remove 11 screws which fasten the brace and covers.
4. Remove the covers and the brace. (See Fig. 19)
5. Re-install the components by referring to the removal procedure, above.

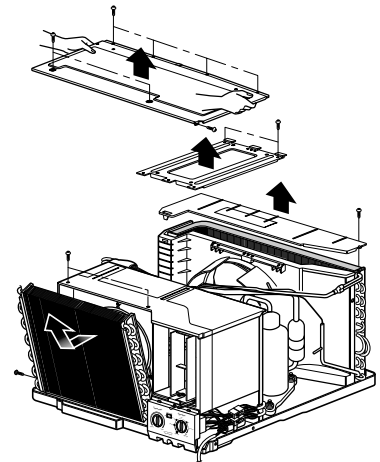


Figure 19

### 5. Blower

1. Remove the cover. (Refer to section 4)
2. Remove the 3 screws which fasten the evaporator at the left side and the top side. (See Fig. 19)
3. Move the evaporator sideward carefully.
4. Remove the 2 terminals carefully (See Fig. 20).
5. Remove the 3 screws which fasten the Heater Cover. (See Fig. 20)
6. Remove the Heater Cover. (See Fig. 20)
7. Remove the orifice from the air guide carefully. (See Fig. 21)
8. Remove the clamp which secures the blower with plier. (See Fig. 21)
9. Remove the blower with plier or your hand without touching blades. (See Fig. 22)
10. Re-install the components by referring to the removal procedure, above.

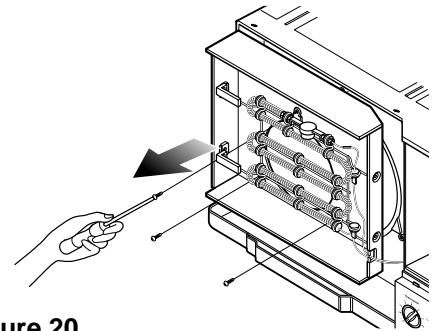


Figure 20

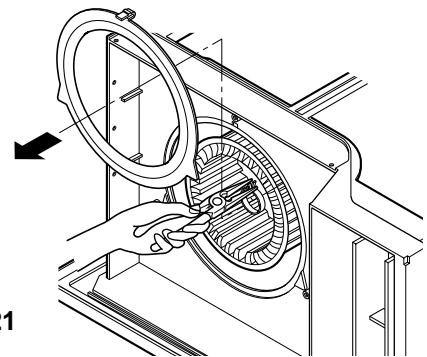


Figure 21

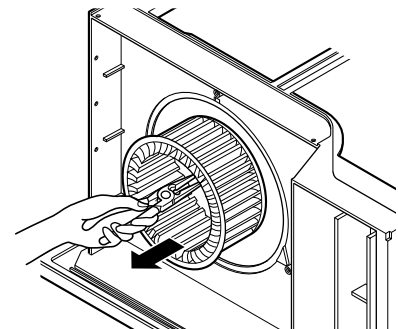


Figure 22

## 6. Fan

1. Remove the cabinet. (Refer to section 2)
2. Remove the brace and shroud cover. (Refer to section 4)
3. Remove the side cover with 2 screws. (See Fig. 23)
4. Remove the 5 or 6 screws which fasten the condenser.
5. Move the condenser sideways carefully.
6. Remove the clamp which secures the fan.
7. Remove the fan. (See Fig. 23)
8. Re-install the components by referring to the removal procedure, above.

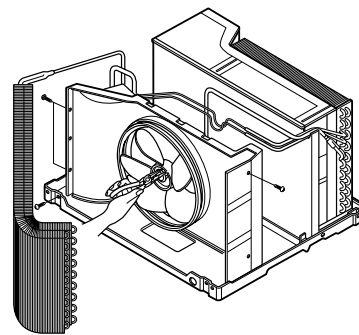


Figure 23

## 7. Shroud

1. Remove the fan. (Refer to section 6)
2. Remove the 2 screws which fasten the shroud.
3. Remove the shroud. (See Fig. 24)
4. Re-install the component by referring to the removal procedure, above.

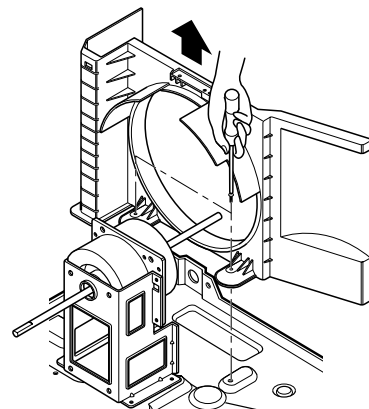


Figure 24

## Electrical parts

## 8. Motor

1. Remove the cabinet. (Refer to section 2)
2. Remove the cover control and disconnect a wire housing in control box. (Refer to section 3)
3. Remove the blower. (Refer to section 5)
4. Remove the fan. (Refer to section 6)
5. Remove the 4 screws which fasten the motor. (See Fig. 25)
6. Remove the motor.
7. Re-install the components by referring to the removal procedure, above.

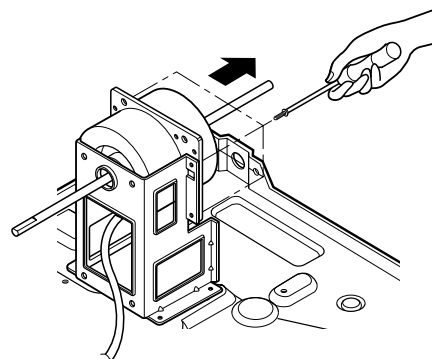


Figure 25

## 9. Compressor

1. Remove the cabinet. (Refer to section 2)
2. Discharge the refrigerant system using Freon™ Recovery System.  
If there is no valve to attach the recovery system, install one (such as a watco a-1) before venting the Freon™. Leave the valve in place after servicing the system.
3. Disconnect the 3 leads from the compressor.
4. After purging the unit completely, unbraid the suction and discharge tubes at the compressor connections.
5. Remove the 3 nuts and the 3 washers which fasten the compressor. (See Fig. 26)
6. Remove the compressor.
7. Re-install the components by referring to the removal procedure, above.

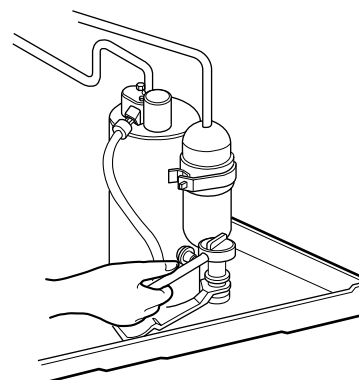


Figure 26

## 10. CAPACITOR

1. Remove the control box. (Refer to section 3)
2. Remove the screw and knobs which fasten the display panel.
3. Disconnect the 2 leads from the rocker switch and remove the panel.
4. Remove a screw and unfold the control box. (See Fig. 27)
5. Remove the screw and the clamp which fastens the capacitor. (See Fig. 27)
6. Disconnect all the leads of capacitor terminals.
7. Re-install the components by referring to the removal procedure, above.

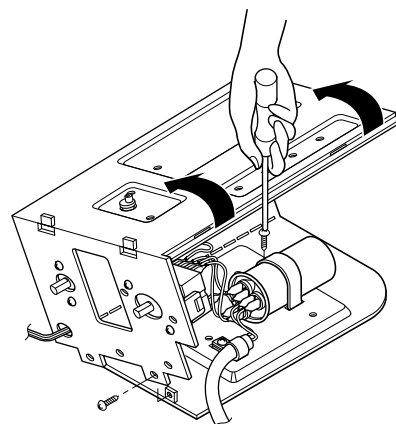


Figure 27

## 11. POWER CORD

1. Remove the control box. (Refer to section 3)
2. Unfold the control box. (Refer to section 10)
3. Disconnect the grounding screw from the control box.
4. Disconnect 2 receptacles.
5. Remove a screw which fastens the clip cord.
6. Pull the power cord. (See Fig. 28)
7. Re-install the component by referring to the removal procedure, above.  
(Use only one ground-marked hole for ground connection.)
8. If the supply cord of this appliance is damaged, it must be replaced by the special cord.  
(The special cord means the cord which has the same specification marked on the supply cord fitted to the unit.)

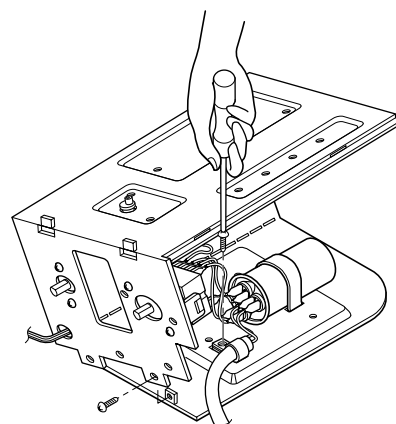


Figure 28

## 12. THERMOSTAT

1. Remove the control box. (Refer to section 3)
2. Unfold the control box. (Refer to section 10)
3. Remove the 2 screws which fasten the thermostat.
4. Disconnect all the leads of thermostat terminals.
5. Remove the thermostat. (See Fig. 29)
6. Re-install the components by referring to the removal procedure, above.

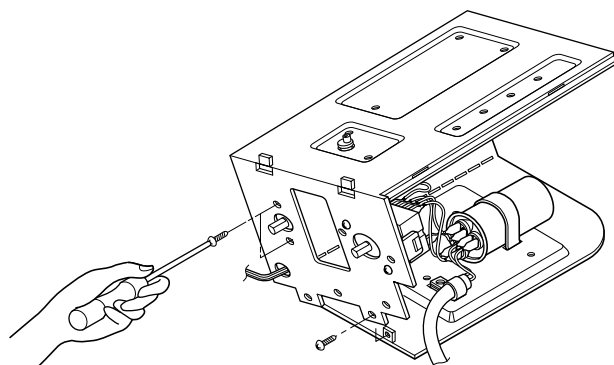


Figure 29



### 13. THERMISTOR

1. Remove the control box. (Refer to section 3)
2. Unfold the control box. (Refer to section 10)
3. Disconnect the thermistor terminals from main P.W.B assembly.
4. Remove the thermistor.
5. Re-install the components by referring to the removal procedure above. (See Figure 30)

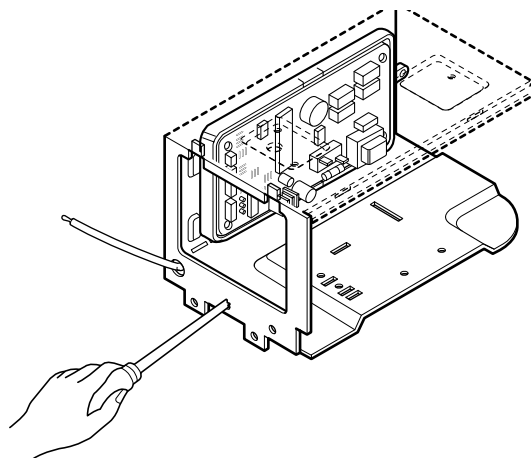


Figure 30

### 14. ROTARY SWITCH

1. Remove the control box. (Refer to section 3)
2. Unfold the control box. (Refer to section 10)
3. Remove 2 screws which fasten the rotary switch.
4. Disconnect all the leads of the rotary switch terminals.
5. Remove the rotary switch. (See Fig. 31)
6. Re-install the components by referring to the above removal procedure, above.

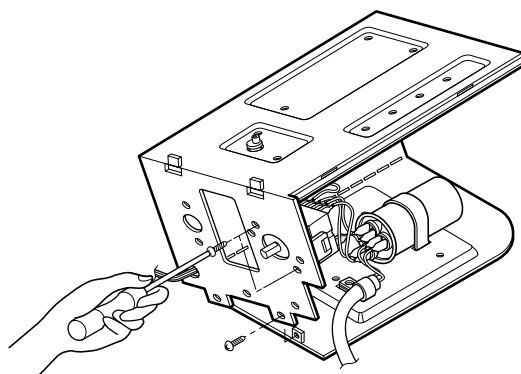


Figure 31

### 15. SYNCHRONOUS MOTOR

1. Remove the control box. (Refer to section 3)
2. Unfold the control box. (Refer to section 10)
3. Remove the crankshaft.
4. Disconnect all the leads of the synchronous motor.
5. Remove the 2 screws which fasten the synchronous motor. (See Fig. 32)
6. Re-install the components by referring to the removal procedure, above.

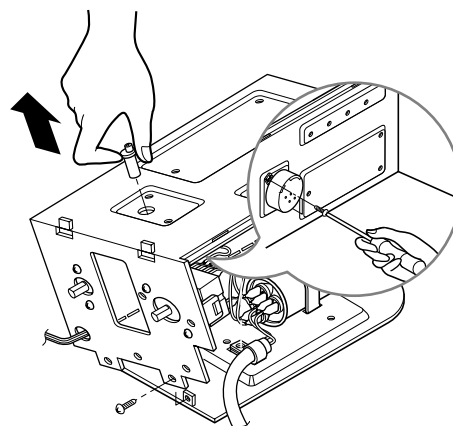


Figure 32

## Refrigeration cycle



**CAUTION:** Discharge the refrigerant system using Freon™ Recovery System. If there is no valve to attach the recovery system, install one (such as a WATCO A-1) before venting the Freon™. Leave the valve in place after servicing the system.

### 16. CONDENSER

1. Remove the cabinet. (Refer to section 2)
2. Remove the brace and the shroud cover. (Refer to section 4)
3. Remove 2 screws which fasten the side cover. (See Fig. 33)
4. Remove the 5 or 6 screws which fasten the condenser.
5. After discharging the refrigerant completely, unbrazed the interconnecting tube at the condenser connections.
6. Remove the condenser.
7. Re-install the components by referring to notes. (See Fig. 33)

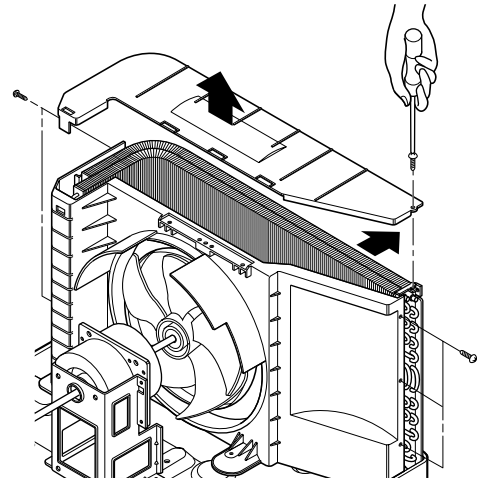


Figure 33

### 17. EVAPORATOR

1. Remove the cabinet. (Refer to section 2)
2. Remove the top cover and the brace. (Refer to section 4)
3. Discharge the refrigerant completely.
4. Remove the 3 screws which fasten the evaporator at the left side and the top side.
5. Move the evaporator sideward carefully and then unbrazed the interconnecting tube at the evaporator connectors.
6. Remove the evaporator.
7. Re-install the components by referring to notes. (See Fig. 34)

### 18. CAPILLARY TUBE

1. Remove the cabinet. (Refer to section 2)
2. Remove the brace. (Refer to section 4)
3. After discharging the refrigerant completely, unbrazed the interconnecting tube at the capillary tube.
4. Remove the capillary tube.
5. Re-install the components by referring to notes.

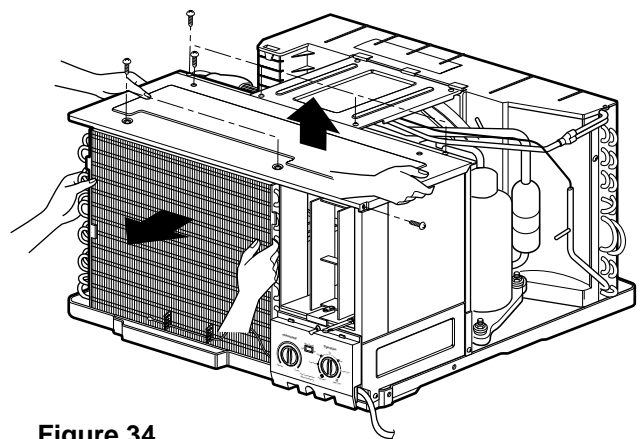


Figure 34

**NOTICE**

- Replacement of the refrigeration cycle.

1. When replacing the refrigeration cycle, be sure to discharge the refrigerant system using a Freon™ recovery System.  
If there is no valve to attach the recovery system, install one (such as a WATCO A-1) before venting the Freon™. Leave the valve in place after servicing the system.
2. After discharging the unit completely, remove the desired component, and unbrace the pinch-off tubes.
3. Solder service valves into the pinch-off tube ports, leaving the valves open.
4. Solder the pinch-off tubes with Service valves.
5. Evacuate as follows.
  - 1) Connect the vacuum pump, as illustrated Fig. 35A.
  - 2) Start the vacuum pump, slowly open manifold valves A and B with two full turns counterclockwise and leave the valves closed.

The vacuum pump is now pulling through valves A and B up to valve C by means of the manifold and entire system.



**CAUTION: If high vacuum equipment is used, just crack valves A and B for a few minutes, then open slowly with the two full turns counterclockwise. This will keep oil from foaming and being drawn into the vacuum pump.**

- 3) Operate the vacuum pump for 20 to 30 minutes, until 600 microns of vacuum is obtained. Close valves A and B, and observe vacuum gauge for a few minutes. A rise in pressure would indicate a possible leak or moisture remaining in the system. With valves A and B closed, stop the vacuum pump.
- 4) Remove the hose from the vacuum pump and place it on the charging cylinder. See Fig. 35B.  
Open valve C.  
Discharge the line at the manifold connection.
- 5) The system is now ready for final charging.

6. Recharge as follows :

- 1) Refrigeration cycle systems are charged from the High-side. If the total charge cannot be put in the High-side, the balance will be put in the suction line through the access valve which you installed as the system was opened.
- 2) Connect the charging cylinder as shown in Fig. 35B. With valve C open, discharge the hose at the manifold connection.
- 3) Open valve A and allow the proper charge to enter the system. Valve B is still closed.
- 4) If more charge is required, the high-side will not take it. Close valve A.
- 5) With the unit running, open valve B and add the balance of the charge.
  - a. Do not add the liquid refrigerant to the Low-side.
  - b. Watch the Low-side gauge; allow pressure to rise to 30 lbs.
  - c. Turn off valve B and allow pressure to drop.
  - d. Repeat steps B and C until the balance of the charge is in the system.
- 6) When satisfied the unit is operating correctly, use the pinch-off tool with the unit still running and clamp on to the pinch-off tube. Using a tube cutter, cut the pinch-off tube about 2 inches from the pinch-off tool. Use sil-fos solder and solder pinch-off tube closed. Turn off the unit, allow it to set for a while, and then test the leakage of the pinch-off connection.

**Equipment needed:** Vacuum pump, Charging cylinder, Manifold gauge, Brazing equipment. Pinch-off tool capable of making a vapor-proof seal, Leak detector, Tubing cutter, Hand Tools to remove components, Service valve.

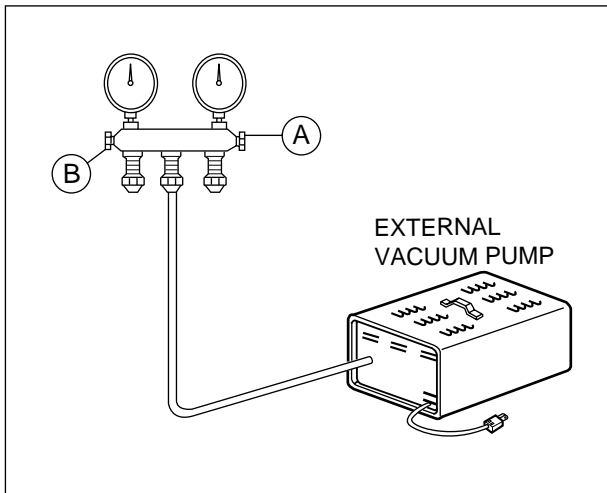
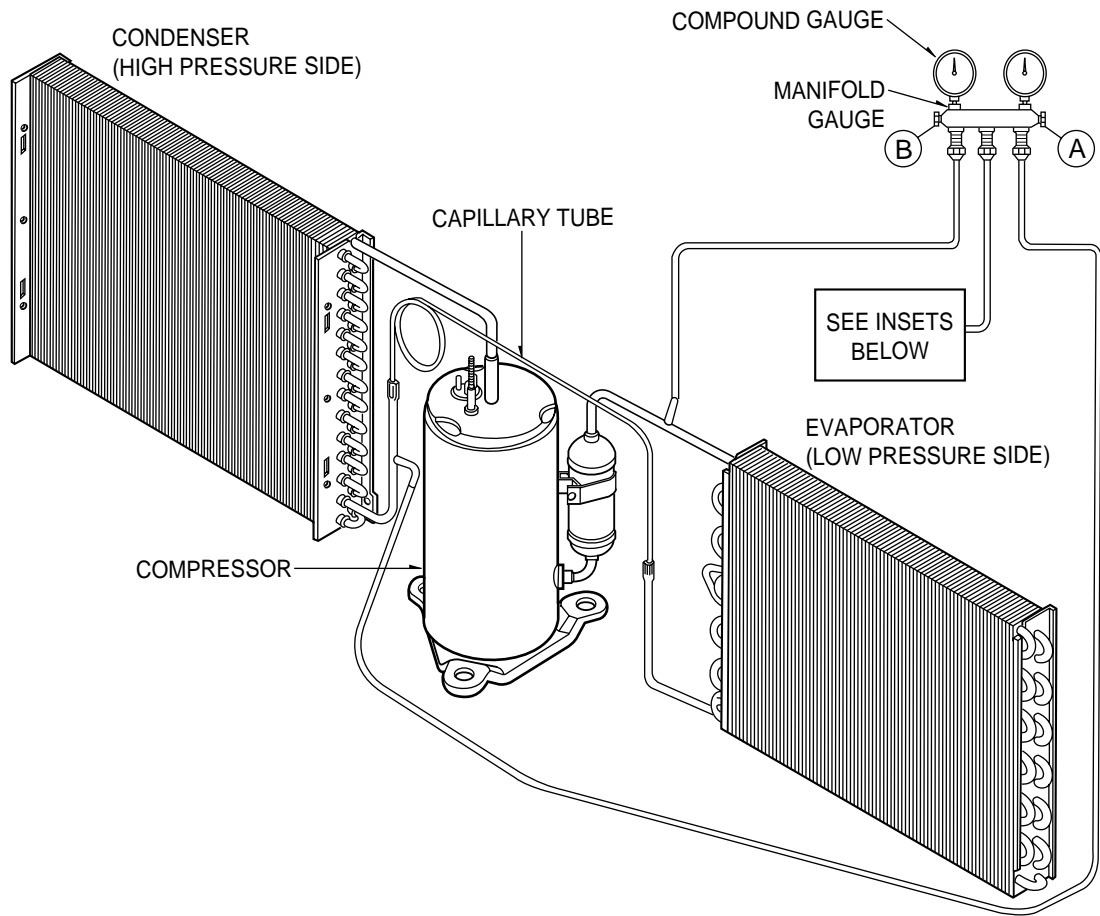


Figure 35A-Pulling Vacuum

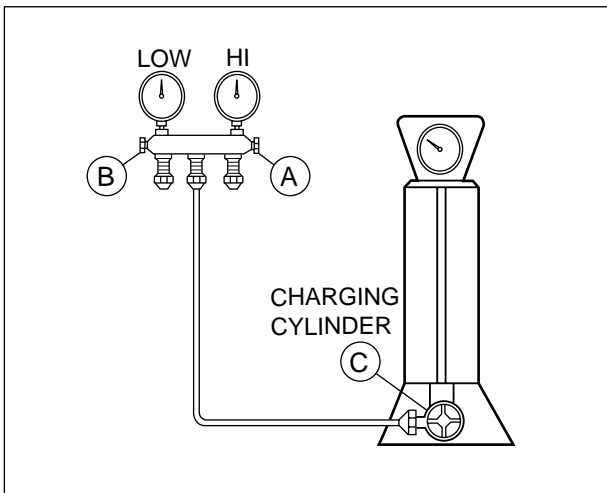
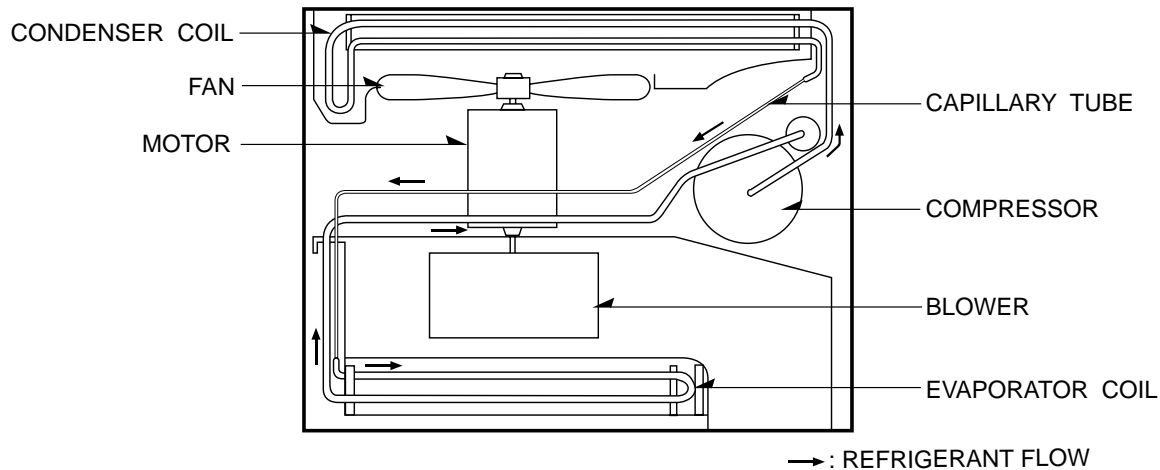


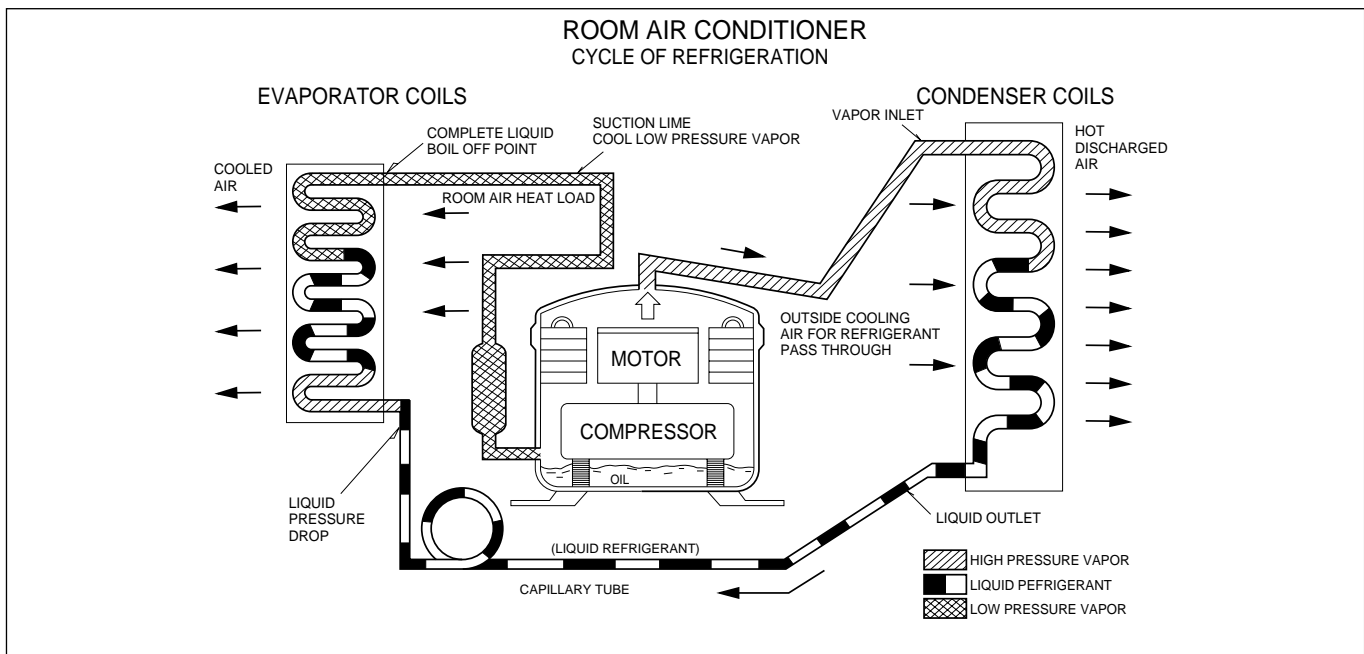
Figure 35B-Charging

# Troubleshooting guide

## Piping system



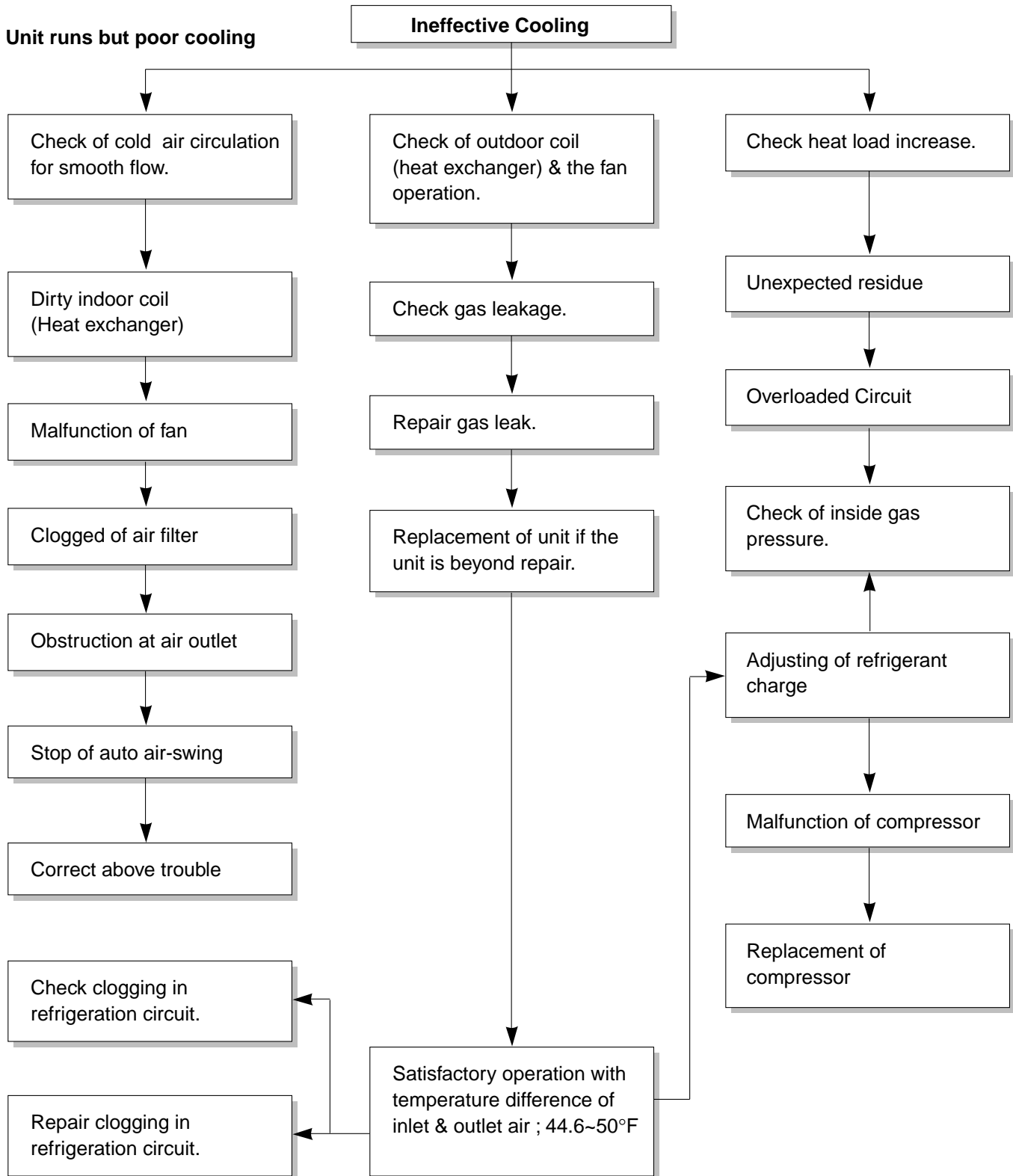
Following is a brief description of the important components and their functions in the refrigeration system. Refer to Fig. 36 to follow the refrigeration cycle and the flow of the refrigerant in the cooling cycle.

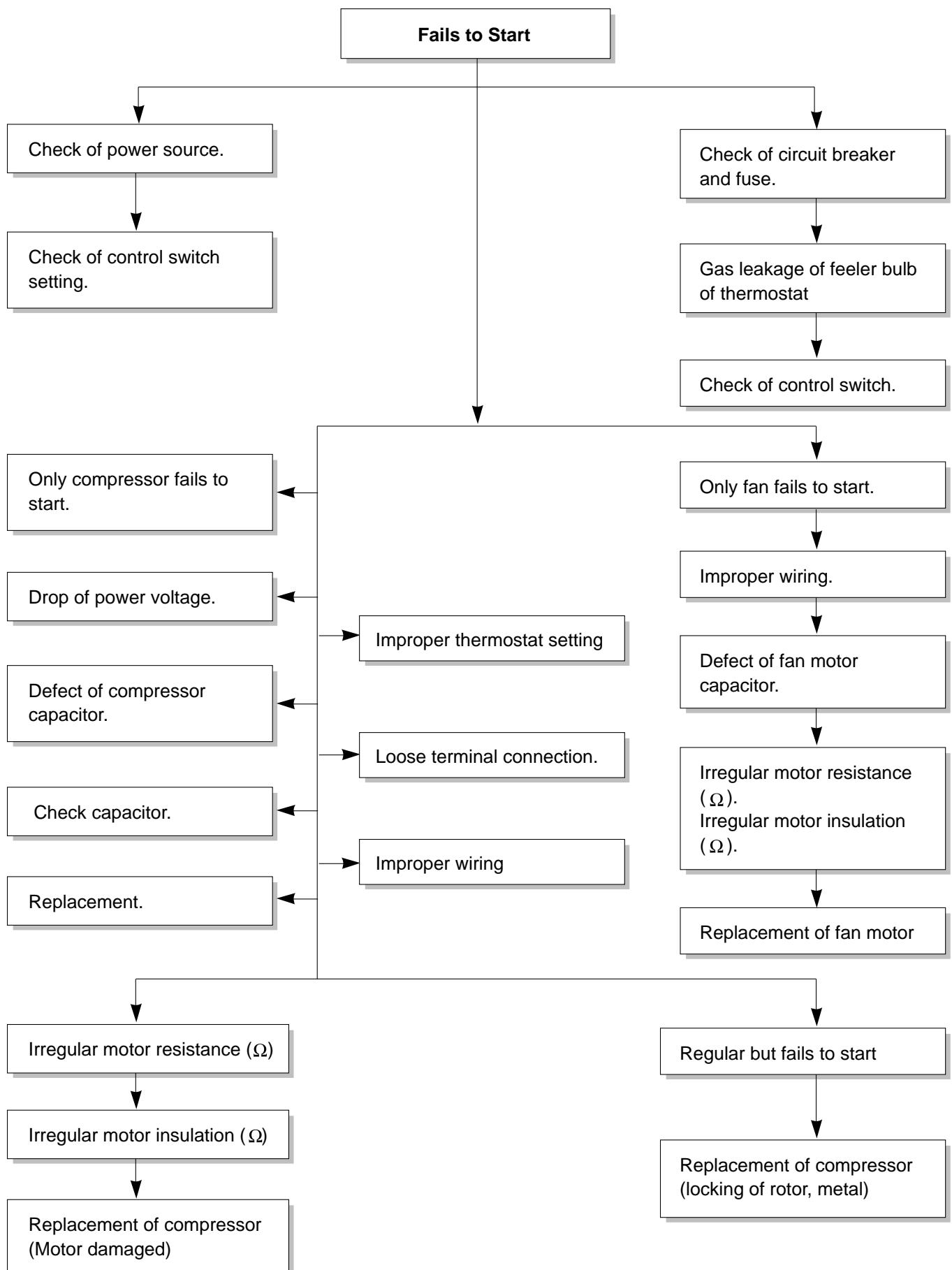


## Troubleshooting guide

In general, possible trouble is classified in two causes.

The one is called Starting Failure which is caused from an electrical defect, and the other is Ineffective Air Conditioning caused by a defect in the refrigeration circuit and improper application.





COMPLAINT	CAUSE	REMEDY
Fan motor will not run.	No power	Check voltage at outlet. Correct if none.
	Power supply cord	Check voltage to rotary switch. If none, check power supply cord. Replace cord if circuit is open.
	Rotary switch	Check switch continuity. Refer to wiring diagram for terminal identification. Replace switch if defective.
	Wire disconnected or connection loose	Connect wire. Refer to wiring diagram for terminal identification. Repair or replace loose terminal.
	Capacitor (Discharge capacitor before testing.)	Test capacitor. Replace if not within $\pm 10\%$ of manufacturer's rating. Replace if shorted, open, or damaged.
	Will not rotate	Fan blade hitting shroud or blower wheel hitting scroll. Realign assembly.  Units using slinger ring condenser fans must have $\frac{1}{4}$ to $\frac{5}{16}$ inch clearance to the base. If it is hitting the base, shim up the bottom of the fan motor with mounting screw(s).  Check fan motor bearings; if motor shaft will not rotate, replace the motor.
Fan motor runs intermittently	Revolves on overload.	Check voltage. See limits on this page. If not within limits, call an electrician.  Test capacitor. Check bearings. Does the fan blade rotate freely? If not, replace fan motor.  Pay attention to any change from high speed to low speed. If the speed does not change, replace the motor.
Fan motor noise.	Grommets	Check grommets; if worn or missing, replace them.
	Fan	If cracked, out of balance, or partially missing, replace it.
	Blower	If cracked, out of balance, or partially missing, replace it.
	Loose set screw	Tighten it.
	Worn bearings	If knocking sounds continue when running or loose, replace the motor. If the motor hums or noise appears to be internal while running, replace motor.



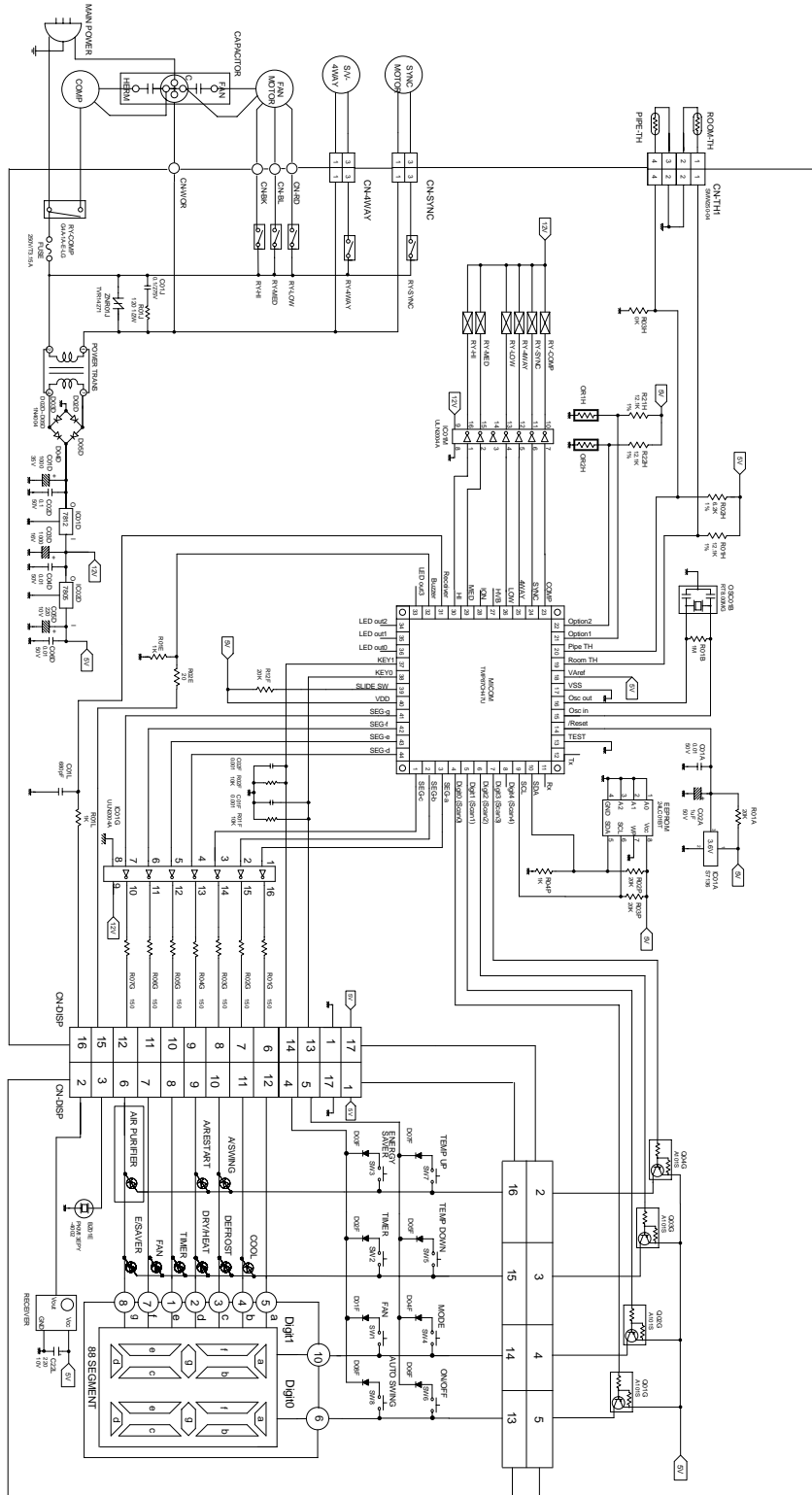
COMPLAINT	CAUSE	REMEDY
Compressor will not run, but fan motor runs.	Voltage	Check voltage. See the limits on the preceding page. If not within limits, call an electrician.
	Wiring	Check the wire connections, if loose, repair or replace the terminal. If wires are off, refer to wiring diagram for identification, and replace. Check wire locations. If not per wiring diagram, correct.
	Rotary	Check for continuity, refer to the wiring diagram for terminal identification. Replace the switch if circuit is open.
	Thermostat	Check the position of knob. If not at the coldest setting, advance the knob to this setting and restart unit. Check continuity of the thermostat. Replace thermostat if circuit is open.
	Thermistor Capacitor (Discharge capacitor before servicing.)	Check the capacitor. Replace if not within $\pm 10\%$ of manufacturers rating. Replace if shorted, open, or damaged.
	Compressor	Check the compressor for open circuit or ground. If open or grounded, replace the compressor.
	Overload	Check the compressor overload, if externally mounted. Replace if open. (If the compressor temperature is high, remove the overload, cool it, and retest.)
Compressor cycles on overload.	Voltage	Check the voltage. See the limits on the preceding page. If not within limits, call an electrician.
	Overload	Check overload, if externally mounted. Replace if open. (If the compressor temperature is high, remove the overload, cool, and retest.)
	Fan motor	If not running, determine the cause. Replace if required.
	Condenser air flow restriction	Remove the cabinet. inspect the interior surface of the condenser; if restricted, clean carefully with a vacuum cleaner (do not damage fins) or brush. Clean the interior base before reassembling.
	Condenser fins (damaged)	If condenser fins are closed over a large area on the coil surface, head pressures will increase, causing the compressor to cycle. Straighten the fins or replace the coil.

COMPLAINT	CAUSE	REMEDY
Compressor cycles on overload.	Capacitor	Test capacitor.
	Wiring	Check the terminals. If loose, repair or replace.
	Refrigerating system	Check the system for a restriction.
Insufficient cooling or heating	Air filter	If restricted, clean or replace.
	Exhaust damper door	Close if open.
	Unit undersized	Determine if the unit is properly sized for the area to be cooled.
Excessive noise.	Blower or fan	Check the set screw or clamp. If loose or missing, correct. If the blower or fan is hitting air guide, rearrange the air handling parts.
	Copper tubing	Remove the cabinet and carefully rearrange tubing not to contact cabinet, compressor, shroud, and barrier.
Auto air-swing fails.	Rotary switch.	Set the knob to HIGH COOL or LOW COOL while rocker switch is ON.
	Wiring	Check terminals. If loose, repair or replace.
	Synchronous motor.	Check the synchronous motor for open circuit.

# Schematic diagram

## Electronic control device

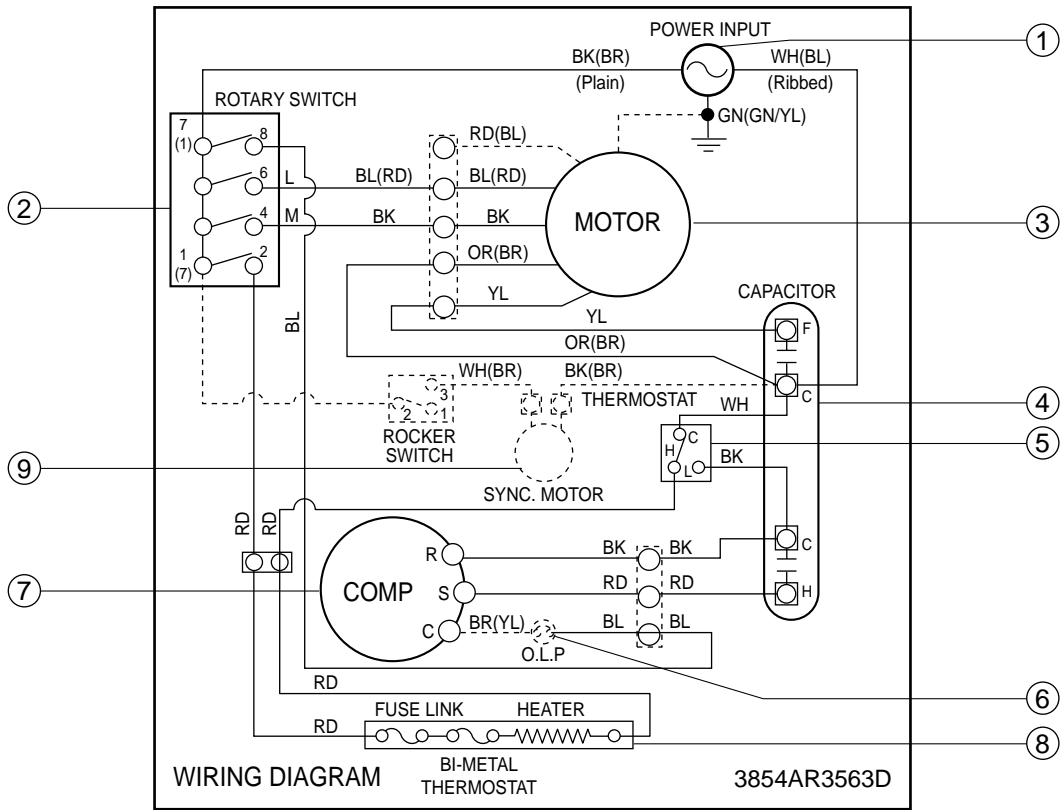
Model: M2400HR



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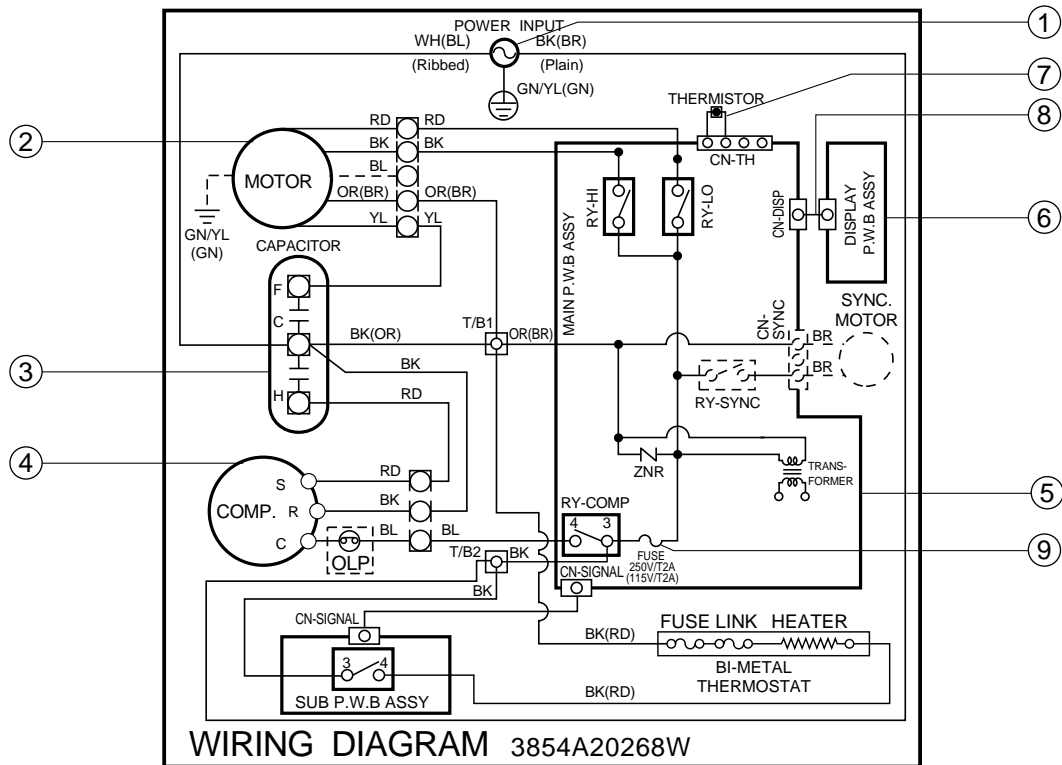
Wiring diagram

■ R1804H



NO.	DESCRIPTION
1	POWER CORD
2	ROTARY SWITCH
3	FAN MOTOR
4	CAPACITOR
5	THERMOSTAT
6	OVERLOAD PROTECTOR
7	COMPRESSOR
8	ELECTRIC HEATER
9	SYNCHRONOUS MOTOR

## ■ R1804H



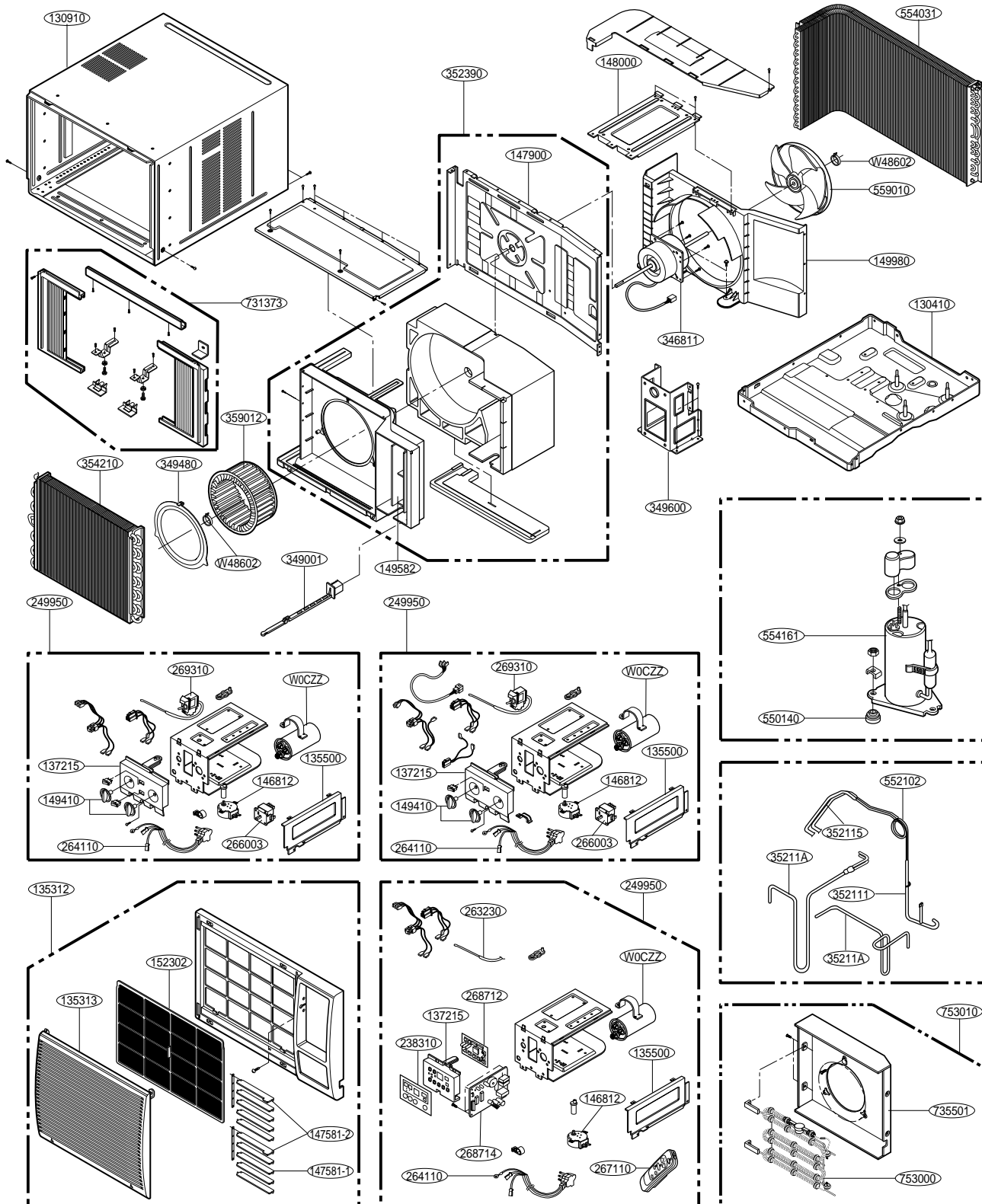
NO.	DESCRIPTION
1	POWER CORD
2	FAN MOTOR
3	CAPACITOR
4	COMPRESSOR
5	MAIN PWB ASSEMBLY
6	DISPLAY PWB ASSEMBLY
7	THERMISTOR ASSEMBLY
8	CONNECTOR
9	FUSE

# Product Specifications

**Table 1**

ITEMS		MODELS	HBLG1800H R1804H LWM1836B5S	M2400HR	REMARK
POWER SUPPLY			1Ø, 208/ 230V, 60Hz	1Ø, 208/ 230V, 60Hz	
COOLING	CAPACITY (Btu/h)		17,500/ 18,000	23,000/ 23,500	
	INPUT (W)		1,800/1,850	2,700/2,760	
	RUNNING CURRENT (A)		9.0/8.3	13.2/12.2	
	E.E.R. (Btu/W.h)		9.7	8.5	
	CAPACITY (Btu/h)		9,800/ 12,000	9,400/11,600	
HEATING	INPUT (W)		3,100/ 3,670	3,750/3,770	
	RUNNING CURRENT (A)		15.0/ 16.0	18.0/16.0	
OPERATING TEMPERA- TURE	COOLING	INDOOR (°C)	26.7 (DB)	19.4 (WB)	
		OUTDOOR (°C)	35 (DB)	23.9 (WB)	
	HEATING	INDOOR (°C)	21.1 (DB)	15.6 (WB)	
		OUTDOOR (°C)	8.3 (DB)	6.1 (WB)	
REFRIGERANT (R-22) CHARGE(g)			710(25.0 OZ)	880(31.0 OZ)	
EVAPORATOR			3 ROW 18 STACKS	3 ROW 19 STACKS	LOUVERED- FIN TYPE
CONDENSER			2 ROW 19 STACKS, L-BENDED TYPE		
FAN, INDOOR			BLOWER		
FAN, OUTDOOR			PROPELLER TYPE FAN WITH SLINGER-RING		
FAN SPEEDS (FAN/COOLING/HEATING)			1/ 2/ 2	2/ 2/ 2	
FAN MOTOR			6 POLES		
OPERATION CONTROL			ROTARY SWITCH	TOUCH PANEL	
ROOM TEMP. CONTROL			THERMOSTAT		
AIR DIRECTION CONTROL			VERTICAL LOUVER (RIGHT & LEFT)		
			HORIZONTAL LOUVER (UP & DOWN)		
CONSTRUCTION			SLIDE IN-OUT CHASSIS		
ELECTRIC HEATER			3.5 KW, 230V		
PROTECTOR	COMPRESSOR		INTERNAL OVERLOAD PROTECTOR		
	FAN MOTOR		INTERANL THERMAL PROTECTOR		
	ELECTRIC HEATER		FUSE LINK, BIMETAL THERMOSTAT		
POWER CORD			1.6m (3 WIRE WITH GROUDING)	1.7m (3 WIRE WITH GROUDING)	
			ATTACHMENT PLUG (CORD-CONNECTED TYPE)		
DRAIN SYSTEM			DRAIN PIPE OR SPLASHED BY FAN SLINGER		
NET WEIGHT		(lbs/kg)	123/ 56	143/ 65	
OUTSIDE DIMENSION (W x H x D)		(inch)	26 x 16 <sup>27</sup> / <sub>32</sub> x 26 <sup>9</sup> / <sub>16</sub>	26 x 16 <sup>27</sup> / <sub>32</sub> x 30 <sup>5</sup> / <sub>16</sub>	
		(mm)	660 x 428 x 675	660 x 428 x 770	

# Exploded view





# Replacement Parts list

R: Service Parts

LOCATION NO.	DESCRIPTION	PART NO.			REMARK
		HBLG1800H	R1804H	LWM1836B5S	
130410	BASE ASSEMBLY, SINGLE	3041A30002B	3041A30002B	3041A30002B	R
130910	CABINET ASSEMBLY, SINGLE	3091AR6057A	3091AR6057A	3091AR6057B	R
135303	GRILLE, INLET	3530AR1604A	3530AR1604A	3530A10070A	R
135312	GRILLE ASSEMBLY, FRONT(SINGLE)	3531A20073M	3531A20005H	3531A20073K	R
135510	COVER ASSEMBLY, CONTROL	3551A30015A	3551A30015A	3551A30015A	R
137215	PANEL ASSEMBLY, CONTROL	3721A20002Q	3721A20002Q	3721A20058D	R
146812	MOTOR ASSEMBLY, SYNC.	2H01102A	2H01102A	2H01102A	R
147581-1	LOUVER, HORIZONTAL	4758AR7264C	4758AR7264C	4758AR7264C	R
147581-2	LOUVER, HORIZONTAL	4758AR7278C	4758AR7278C	4758AR7278C	R
147582	LOUVER, VERTICAL	4758AR6157A	4758AR6157A	4758AR6157A	R
148000	BRACE	4800AR7272A	4800AR7272A	4800AR7272A	R
149410	KNOB ASSEMBLY	4941A30001A	4941A30001A	4941A30001A	R
149980	SHROUD	4998AR1597A	4998AR1597A	4998AR1597A	R
152302	FILTER(MECH), A/C	5231AR6159A	5231AR6159A	5231AR6159A	R
249950	CONTROL BOX ASSEMBLY	4995A20051A	4995A20051A	4995A20051D	R
264110	POWER CORD ASSEMBLY	2H00677U	2H00677U	2H00677U	R
266002	SWITCH, ROCKER	2H01316C	2H01316C	2H01316C	R
266003	SWITCH, ROTARY	2H00598F	2H00598F	2H00598F	R
269310	THERMOSTAT ASSEMBLY	2H01127B	2H01127B	2H01127B	R
346811	MOTOR ASSEMBLY, SINGLE	4681AR6033K	4681AR6033K	4681AR6033K	R
349001	DAMPER, VENTILATION	4900AR7265A	4900AR7265A	4900AR7265A	R
349600	MOUNT, MOTOR	4960AR1596A	4960AR1596A	4960AR1596A	R
35211A	TUBE ASSEMBLY, SUCTION	5211A20204C	5211A20204C	5211A20204C	R
352111	TUBE ASSEMBLY, CONNECTOR	5211AR7059A	5211AR7059A	5211AR7059A	R
352113	TUBE ASSEMBLY, DISCHARGE SINGLE	5211A30066A	5211A30066K	5211A30066K	R
352115	TUBE EVAPORATOR	5210A20433B 5210A20434B	5210A20433B 5210A20434B	5210A20433B 5210A20434B	R
352390	AIR GUIDE ASSEMBLY	5239A20001N	5239A20001G	5239A20001N	R
354210	EVAPORATOR ASSEMBLY, FIRST	5421A20059F	5421A20059F	5421A20059F	R
359012	FAN ASSEMBLY, BLOWER	5834AR1599B	5834AR1599B	5834AR1599B	R
550140	ISOLATOR, COMP	4H00982C	4H00982C	4H00982C	R
552102	TUBE, CAPILLARY BEND	5211A20020P	5211A20020P	5211A20020P	R
554031	CONDENSER ASSEMBLY, BENT	5403A20004F	5403A20004F	5403A20004K	R
554160	COMPRESSOR	2520UMNK2BA	5416A20003J	2520UMNK2BA	R
559010	FAN ASSEMBLY, AXIAL	5900AR1508A	5900AR1508A	5900AR1508A	R
731273	INSTALL PART ASSEMBLY	3127A10015M	3127A10015M	-	R
753000	HEATER ELECTRIC	5300A20003A	5300AR1571B	5300A20003A	R
753010	HEATER ASSEMBLY, ELECTRIC	5301A30001B	5301A30001A	5301A30001B	R
W0CZZ	CAPACITOR	6120AR2359E	6120AR2359E	6120AR2359E	R
W48602	CLAMP, SPRING	3H02932C	3H02932C	3H02932C	R

(NOTE) \*Please ensure GCSC since these parts may be changed depending upon the buyer's request.  
(GCSC WEBSITE <http://biz.lgservice.com>)

LOCATION NO.	DESCRIPTION	PART NO.	REMARK
		M2400HR	
130410	BASE ASSEMBLY, SINGLE	3041A10010K	R
130910	CABINET ASSEMBLY, SINGLE	3041AR6056B	R
135303	GRILLE, INLET	3530AR1604A	R
135312	GRILLE ASSEMBLY, FRONT(SINGLE)	3531A20073P	R
135313	GRILLE ASSEMBLY, INLET	-	R
135510	COVER ASSEMBLY, CONTROL	3551A30015A	R
137215	PANEL ASSEMBLY, CONTROL	3720AR6163A	R
146812	MOTOR ASSEMBLY, SYNC.	2H01102N	R
147581-1	LOUVER, HORIZONTAL	4758AR7264C	R
147581-2	LOUVER, HORIZONTAL	4758AR7278C	R
147582	LOUVER, VERTICAL	4758AR6157A	R
148000	BRACE	4800AR7271A	R
149410	KNOB ASSEMBLY	-	R
149980	SHROUD	4998A10027A	R
152302	FILTER(MECH), A/C	5231AR6159A	R
249950	CONTROL BOX ASSEMBLY	4995A20186A	R
264110	POWER CORD ASSEMBLY	6411A20048L	R
269310	THERMISTOR ASSEMBLY	6323A20003D	R
346811	MOTOR ASSEMBLY, SINGLE	4681A20011L	R
349001	DAMPER, VENTILATION	4900AR7265A	R
349600	MOUNT, MOTOR	4960AR2895B	R
35211A	TUBE ASSEMBLY, SUCTION	5211A20159C	R
352111	TUBE ASSEMBLY, CONNECTOR	5211A20162A	R
352113	TUBE ASSEMBLY, DISCHARGE SINGLE	5211A20805Q	R
352115	TUBE EVAPORATOR	5211A20162A,B,C	R
352390	AIR GUIDE ASSEMBLY	5239A20001N	R
354210	EVAPORATOR ASSEMBLY, FIRST	5421A20052B	R
359012	FAN ASSEMBLY, BLOWER	5834AR1599B	R
550140	ISOLATOR, COMP	4022U-L005A	R
552102	TUBE, CAPILLARY BEND	5211A30296B	R
554030	CONDENSER ASSEMBLY, BENT	5403A20112D	R
554160	COMPRESSOR	2520UHFK2CA	R
559010	FAN ASSEMBLY, AXIAL	5900AR1508A	R
731273	INSTALL PART ASSEMBLY	3127A10015M	R
753010	HEATER ELECTRIC	5300A20003A	R
753011	HEATER ASSEMBLY, ELECTRIC	5301A30001B	R
W0CZZ	CAPACITOR	6120AR2194P	R
W48602	CLAMP, SPRING	3H02932C	R

NOTE) \*Please ensure GCSC since these parts may be changed depending upon the buyer's request.  
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